

论著

一个新的靶向 *HER-2* mRNA 的反义寡核苷酸, HA824, 对 *HER-2* 表达的影响

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收稿日期 2002-10-16 修回日期 网络版发布日期 2008-10-10 接受日期 2002-12-16

摘要 目的 观察HA824, 这种新合成的靶向*HER-2* mRNA的反义寡核苷酸对SK-BR-3乳癌细胞株mRNA和蛋白表达的特异性作用。方法 以HA4为阳性对照, 随机序列为随机对照检测了HA824对SK-BR-3细胞生长的抑制作用与IC₅₀值; 采用逆转录聚合酶链反应(RT-PCR)、流式细胞技术、免疫组织化学法检测了对SK-BR-3细胞mRNA与蛋白表达的影响。结果 结果表明HA824对SK-BR-3乳癌细胞的生长有剂量依赖性的抑制作用(IC₅₀(nmol·L⁻¹): HA824, (47±26); HA4, (97±41); 随机序列, (251±86)。HA824 vs HA4, *P*<0.05)。HA824还显著抑制了*HER-2* mRNA与蛋白的表达(免疫组化结果: HA824, 1+染色; HA4, 2+染色; 随机序列, 3+染色; 流式细胞技术检测结果, 荧光强度分别为: HA824, 338.6; HA4, 355.5; 随机序列, 532.4)。结论 HA824对SK-BR-3乳癌细胞生长的抑制作用与特异性的抑制*HER-2*表达有关。

关键词 癌基因, *HER-2* 寡核苷酸类, 反义 基因表达 蛋白表达

分类号 [R979.1](#)

Effect of a new antisense oligodeoxyribonucleotide, HA824, targeting at *HER-2* mRNA on *HER-2* expression

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Abstract

AIM To observe specific effect of HA824, a new synthesized antisense oligodeoxyribonucleotide(ODN), HA824, targeting at *HER-2* mRNA on *HER-2* expression in SK-BR-3 breast cancer cells in mRNA and protein levels. **METHODS** Antisense ODN HA824 targeting at *HER-2* mRNA was synthesized as our previous description. Growth inhibition effect, mean(*n*=3-5) 50% inhibitory concentrations (IC₅₀) on proliferations of SK-BR-3 cells for HA824, HA4 and scramble were evaluated. HA824 on *HER-2* mRNA and protein expression were examined by means of RT-PCR, flow cytometry and immunohistochemistry. **RESULTS** The results indicated HA824 inhibited proliferation of SK-BR-3 cells in a dose dependent manner (IC₅₀(nmol·L⁻¹): HA824, (47±26); HA4, (97±41); scramble, (251±86). HA824 vs HA4, *P*<0.05). HA824 also significantly suppressed *HER-2* mRNA and protein expression detected by RT-PCR, immunohistochemistry(HA824, light staining; HA4, moderate staining; scramble, heavy staining) and flow cytometry (fluorescence intensity: HA824, 338.6; HA4, 355.5; scramble, 532.4). **CONCLUSION** Not only can this kind of new synthesized antisense compound suppressed proliferation of SK-BR-3 breast cancer cells, but also specially inhibited *HER-2* expression in mRNA and protein levels.

Key words [oncogenes](#) [HER-2](#) [oligodeoxyribonucleotides](#) [antisense](#) [gene expression](#) [protein expression](#)

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